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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/024,278	12/21/2001	Roger Spink	016790-0447	4914
22428	7590	11/09/2004	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			FINEMAN, LEE A	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 11/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/024,278	Applicant(s) SPINK, ROGER	
	Examiner Lee Fineman	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-13,15-28 and 30-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-13,15-28 and 30-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/24/02 & 5/14/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to an amendment filed 3 September 2004 in which claims 1, 19, 22, 24, 27, 33-36 were amended and claims 40-45 were added. Claims 1, 3-9, 11-13, 15-28 and 30-45 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-6, 8-9, 11-13, 15-19, 21-26, 33-34, 38-40 and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fantone et al., U.S. Patent No. 4,786,154.

Regarding claims 1, 6, 19, 21, 22, 38, 40 and 42, Fantone et al. disclose a device for controlling a characteristic of an image signal superimposed on a specimen image (fig. 2), which is a microscope, comprising a main optical system (12, 13, 14), which is a microscope, configured to refract light emitted from a specimen (10) into a main beam path (not numbered from 10 to 22); a superimposition apparatus (42), which is a display, in a fixed relationship to the main optical system (fig. 2) to a viewer (after 22), configured to generate the image signal; a superimposing reflector (46) configured to reflect the image signal generated by the superimposition apparatus into the main beam path and to superimpose the image signal onto the specimen image (column 4, lines 24-31); an image measurement unit (38), which is a CCD, in a fixed relationship to the main optical system (fig. 2), configured to measure a brightness of the

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specimen image (column 2, line 61-column 3, line 22, in so far as the sensors (38) provide a video signal of the entire image, which includes measured information on the brightness of the image); a controller configured to adjust, with a control signal, the brightness of a plurality of regions (column 3, line 25) of the image signal generated by the superimposition apparatus in response to a measurement by the image measurement unit of the brightness of corresponding regions the specimen image (column 3, lines 16-26); and a manual input unit for providing a manual input signal from a viewer to the controller, wherein the controller is configured to adjust the brightness of the image signal generated by the superimposition apparatus in response to the manual input signal and the measurement by the image measurement unit (part of 40, in so far as there must be some manual input and therefore a manual input unit to provide input direction about the image enhance, e.g. the specified frequency stated in column 3, lines 20-21). Although Fantone et al. does not explicitly state wherein the controller decreases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be dull or wherein the controller increases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be bright, Fantone et al. does disclose that image signal can be processed by various known methods to provide enhancement of various features of interest on the object (column 3, lines 6-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make any adjustment including wherein the controller decreases the brightness of the plurality of regions when the brightness of the corresponding regions is measured to be dull and wherein the controller increases the brightness of the plurality of regions when the brightness of the corresponding regions is

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measured to be bright to provide any desired enhancement of various features of interest on the object. The method of utilizing the structure of the claim is inherent therein.

Regarding claim 3, Fantone et al. further disclose wherein the image measurement unit is configured to measure a spatial brightness distribution of the specimen image (column 3, lines 18-26).

Regarding claims 4-5 and 23, Fantone et al. further disclose wherein the image measurement unit is further configured to measure one selected from the group of color and contrast, the controller is further configured to adjust the selected one of color and contrast (column 3, lines 27-35), and the image measurement unit is configured to measure a spatial color or contrast distribution of the specimen image (column 3, lines 43-51).

Regarding claim 8, Fantone et al. further disclose wherein the image measurement unit is configured to measure the brightness of the specimen image by measuring light emitted from the specimen and refracted by the main optical system (12, 14) into the main beam path (fig. 2).

Regarding claims 9 and 24, Fantone et al. further disclose a beam splitter (32) configured to reflect a portion of the specimen image from the main beam path to the image measurement unit.

Regarding claims 33, 34, 39 and 45, Fantone et al. further disclose wherein the controller configured to adjust brightness of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of brightnesses of corresponding regions of the specimen image (column 2, line 61-column 3, line 22), so as to maintain substantially constant ratios of each of the brightnesses of the plurality of regions of image signal (enhanced image) to each of the brightnesses of the corresponding regions of the specimen image

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(in so far as once the gain is changed a specific amount substantially constant ratios will be maintained).

Regarding claims 11-13, 15-16 and 25-26, Fantone et al. further discloses wherein the image measurement unit is configured to measure brightness of individual regions of the specimen image, wherein the controller is configured to adjust brightness of individual regions of the image signal generated by the superimposition apparatus in response to the measurement by the image measurement unit, and wherein the individual regions are individual pixels (column 3, lines 27-42); and wherein the image measurement unit is configured to measure brightness of those individual regions that are in a viewer's line of sight (column 3, line 5-column 4, line 16).

Regarding claims 17-18 and 43-44, Fantone et al. further discloses wherein the controller is configured to adjust brightness of individual pixels of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding pixels of the specimen image and wherein the controller is configured to adjust brightness of individual regions of the image signal generated by the superimposition apparatus in response to measurements by the image measurement unit of the brightness of the corresponding regions of the specimen image (column 3, line 63-column 4, line 9).

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fantone et al. in view of Shioda et al., U.S. Patent No. 6,081,371.

Fantone et al. disclose the claimed invention except wherein the image measurement unit is configured to measure the brightness of the specimen by directly measuring light emitted from

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the specimen and not refracted by the main optical system. Shioda et al. teaches a device (fig. 1) which controls the brightness (column 10, lines 34-42) of a superimposed image (43, fig. 3b) on a specimen image (44, fig. 3b) wherein the image measurement unit (32) is configured to measure the brightness of the specimen by directly measuring light emitted from the specimen and not refracted by the main optical system (fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the image measurement unit measure directly from the specimen and not be refracted by the main optical system as suggested by Shioda et al. to save money and simplify the system by reducing the number of parts needed.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fantone et al in view of Grund et al., U.S. Patent No. 6,217,519 B1.

Fantone et al. disclose the claimed invention except wherein the manual input unit is operable remotely from the device. Grund et al. teaches a system that combines images (fig. 1, column 3, line 65-column 4, line 8) and has a manual input unit (22) that is operable remotely from the device (column 4, lines 12-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the manual input unit of Fantone et al. operable remotely from the device as suggested by Grund et al. to provide a more flexible working area.

5. Claims 27-28, 30-32, 35-37 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fantone et al. in view of Marino et al., U.S. Patent No. 5,307,202.

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Regarding claims 27, 30, 35-37 and 41, Fantone et al. disclose the claimed invention except for explicitly stating that the superimposition apparatus is automatically adjusted in response to a measurement by the image measurement unit of the brightness of the specimen image; or wherein the brightness of a plurality of regions of the image signal generated by the superimposition apparatus is automatically adjusted in response to measurements by the image measurement unit of the brightnesses of corresponding regions of the specimen image, so as to maintain substantially constant ratios of each of the brightnesses of the plurality of regions of the image signal to each of the brightness of the specimen image. Marino et al. discloses a device for controlling a characteristic of an image signal superimposed on a specimen image (fig. 1) wherein the superimposition apparatus (11) can be automatically adjusted via software (column 2, lines 40-51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the superimposition apparatus of Fantone et al. automatically adjust the overall brightness as suggested by Marino et al. to provide faster adjustment times.

Regarding claim 28, Fantone et al. further disclose the microscope being a surgical stereomicroscope (column 1, lines 7-8).

Regarding claims 31 and 32, Fantone et al. further disclose wherein the image measurement unit is configured to measure brightness of individual regions of the specimen image, wherein the controller is configured to adjust brightness of individual regions of the image signal generated by the superimposition apparatus in response to the measurement by the image measurement unit, and wherein the individual regions are individual pixels (column 3, lines 27-42).

Response to Arguments

6. Applicant's arguments with respect to claims 1, 3-9, 11-13, 15-26, 33-34, 38-40 and 42-45 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's arguments filed 3 September 2004 have been fully considered but they are not persuasive.

Applicant argues that although Martino does teach the use of software, it does not mean that the device is automated. However, the examiner would like to point out that in column 2, lines 47-51 Marino states that software "may be used for converting the digital images to visual image, as well as magnifying, rotating, and/or warping the images **as they are converted**," which would be an automatic adjusting function.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF

November 3, 2004


MARK A. ROBINSON
PRIMARY EXAMINER